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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,376	07/09/2003	Matthias Kuntz	MERCK-2708	1368
23599	7590	11/03/2004	EXAMINER	
MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201			SADULA, JENNIFER R	
			ART UNIT	PAPER NUMBER
			1756	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/615,376

Applicant(s)

KUNTZ ET AL

Examiner

Jennifer R. Sadula

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

The abstract of the disclosure is objected to because there is no brief disclosure of the figures. Correction is required. See MPEP § 608.01(b).

Claim Objections

Claims 11-17 are objected to because of the following informalities: Claim 11 contains misspellings. Claims 11-17 become unclear as they are devices reliant upon method claims wherein the device is never made clear via the method claims from which they rely. Lastly, Applicants are advised to amend the word “claims” to the word “claim” where appropriate. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-17 are rejected under 35 U.S.C. 102(e) as being fully anticipated by Faris et al., U.S. Patent No. 6,753,044 (“Faris ‘044”).

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Applicant claims a method of generating a 3-D effect by providing at least two imaged layers of chiral LC material (one reflecting left-handed and the other right-handed circularly polarized light)- wherein the layers are preferably either polymerized or crosslinked cholesteric aligned LC material and wherein the layers are preferably not directly superimposed onto each other and/or the layers do not form a stereo pair of images. Examiner notes that due to the “and/or” clauses the material need only be two layers of left and right handed CLC materials. All other stipulations appear to be “preferences” rather than requirements.

Faris '044 teaches CLC microflake coloring materials having a circularly polarizing reflection characteristic utilized for the purposes of forming polarization-encoded spatially multiplexed images on radiation absorbing surfaces which thereby produce stereoscopic 3-D images when viewed through electrically passive polarization glasses. As noted in figures 2a-d the microflakes are formed of spectrally tuned CLC layers. As noted in the figures labeled “3” this embodiment depicts variation of the spacing of the layers. With regard to Applicants claim 3 the materials are LC and thus they contain mesogenic units. With regard to Applicants claims 4-5 the materials are printed upon substrates. With regard to Applicants claim 8 the materials may reflect at different wavelengths as multiple colors may be preferred (16:48-65).

Claims 1-17 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Faris, U.S. Patent No. 5,264,964 (“Faris ‘964”).

Faris '964 discloses multimode stereoscopic imaging systems based upon micro-polarizer arrays and special multiplexing of images (abstract). Faris '964 teaches the use of polarizer polymers such as cholesteric LC materials (3:43-50) having two polarizer states, P1 and P2

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(3:60-4:7). The sheet polarizer device is further depicted in column 5. With regard to Applicants claim 3 the materials are LC and thus they contain mesogenic units. With regard to Applicants claims 4-5 the materials are printed upon substrates. With regard to Applicants claim 8 the materials may reflect at different wavelengths as multiple colors may be preferred.

Claims 1-17 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Faris, U.S. Patent No. 5,457,554 ("Faris '554").

Faris '554 teaches 3-D printing technology based on left and right-handed CLC circularly polarized light (abstract). As shown in figures 1-2 the layers are not in direct contact with one another but rather are separated by a spacer region. With regard to Applicants claim 3 the materials are LC and thus they contain mesogenic units. With regard to Applicants claims 4-5 the materials are printed upon substrates. With regard to Applicants claim 8 the materials may reflect at different wavelengths as multiple colors may be preferred (4:21-5:22). The devices are further illustrated in the claims.

Claims 1-17 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Sharp et al., U.S. Patent No. 5,381,253 ("Sharp '253").

Sharp '253 teaches chiral smectic LC materials aligned in layers forming binary modulation of light. Similar to Faris, With regard to Applicants claim 3 the materials are LC and thus they contain mesogenic units. With regard to Applicants claims 4-5 the materials are printed upon substrates. With regard to Applicants claim 8 the materials may reflect at different wavelengths as multiple colors may be preferred.

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Claims 1-17 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Sharp et al., U.S. Patent No. 5,552,912 ("Sharp '912").

Sharp '912 teaches chiral smectic LC materials aligned in layers within an optical resonance cavity. The internal layers may further comprise alignment layers to assist in the alignment of the CLC materials (9:14-37). Similar to Faris, With regard to Applicants claim 3 the materials are LC and thus they contain mesogenic units. With regard to Applicants claims 4-5 the materials are printed upon substrates. With regard to Applicants claim 8 the materials may reflect at different wavelengths as multiple colors may be preferred when monochromatic is not selected.

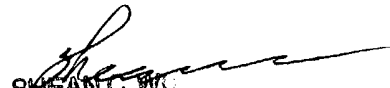
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer R. Sadula whose telephone number is 571.272.1391. The examiner can normally be reached on Monday through Friday, 10am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F. Huff can be reached on 571.272.1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SHEAN C. WANG
PRIMARY EXAMINER

JRS

31 October 2004